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THIRD CONTRIBUTION TO THE HERPETOLOGY OF AFGHANISTAN

by

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Recently Mr. John Gasperetti, Field Associate of the California Academy of Sciences, presented a small number of amphibians and reptiles taken in Afghanistan to the Academy. These animals, taken during April and May, and August through October of 1961, constitute Mr. Gasperetti's third contribution to this little-known fauna. It supplements collections he made in 1950 and during March and April of 1961, already reported on by Leviton (1959) and Leviton and Anderson (1961).

The recent collection of 44 specimens was made in eastern Afghanistan. The following species are represented: *Bufo viridis, Rana sternosignata, Agama caucasica, Ablepharus pannonicus, Eremias guttulata watsonana, Ptyas mucosus, Coluber rhodorachis,* and *Alsophylax pipiens.* The latter species is recorded for the first time from Afghanistan. All specimens were taken between April 1 and May 11, and August 1 and October 20, 1961, be-

tween Kabul and Kara Bagh[1] at elevations varying between 1500 and 2600 meters.

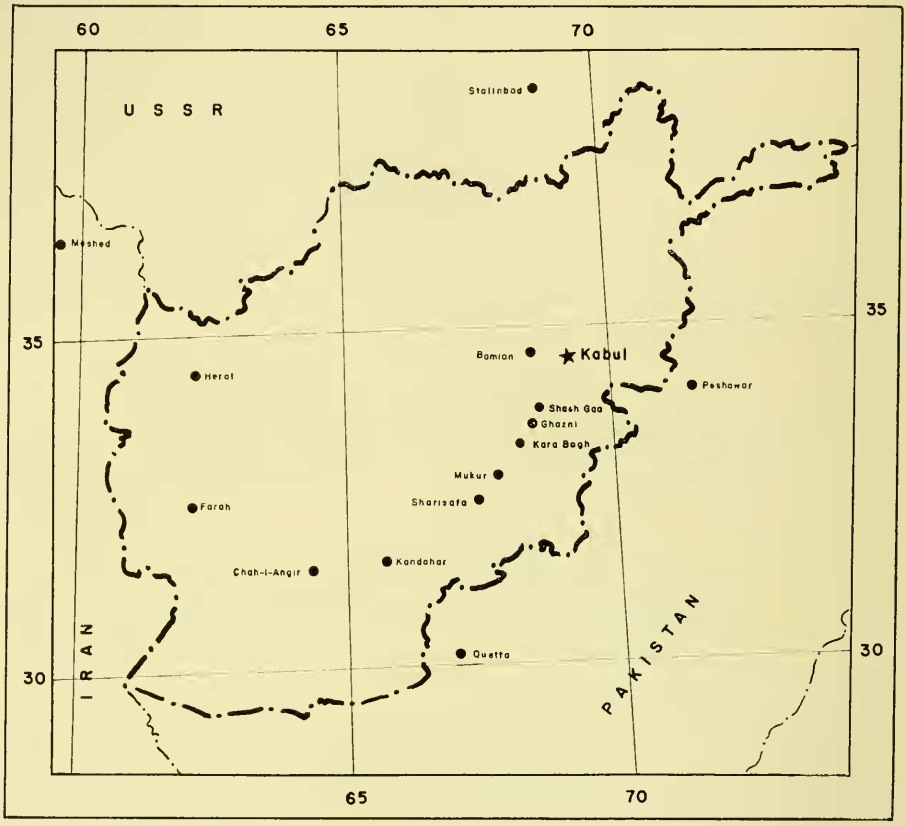

FIGURE 1. Map of Afghanistan showing localities mentioned in the text. This map is the same as that published by the authors in 1961, but the position of Kara Bagh has been corrected (see footnote 1).

SYSTEMATIC NOTES

Bufo viridis Laurenti.

MATERIAL EXAMINED (13): Kara Bagh [April 1] (CAS 90759); Ghazni [April 15] (CAS 91603–91609); marshy area along Logar River, 7–8 km. south from Kabul [Oct. 20] (CAS 92337); Kabul [Aug. 9] (CAS 92325–92328).

1. In their earlier paper the authors located Kara Bagh about 35 km. north of Kabul. Mr. Gasperetti has indicated (personal communication) that this was in error and that the locality Kara Bagh is a group of villages about a third of the distance from Ghazni to Mukur (see map, figure 1).

The specimens taken in April range from 53–58 mm. snout-vent length. Of that series the four females contain ripe ova. Young (snout-vent length of 26–34 mm.) were collected in August, and a single male (59 mm.) was taken in October.

The dark blotches on the dorsum vary considerably among individuals; they are more pronounced in the females than in the males and the sexes are easily separable on this basis alone (figure 2).

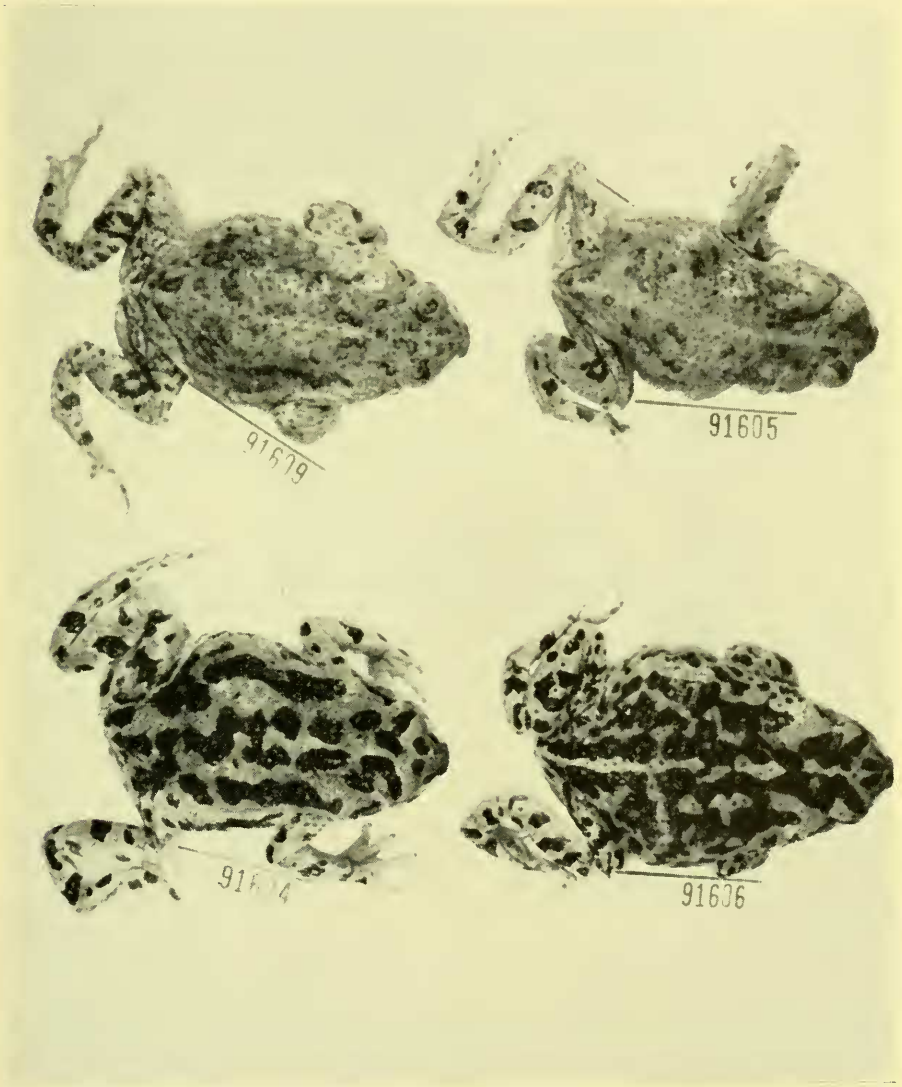

Figure 2. *Bufo viridis* showing differences in dark blotches between males (top) and females (bottom).

Rana sternosignata Murray.

MATERIAL EXAMINED (7): Marshy area along Logar River, 7–8 km. south from Kabul [Oct. 20] (CAS 92330–92336).

Seven specimens of this robust, aquatic ranid were taken (figure 3). The

FIGURE 3. *Rana sternosignata*, dorsal view.

males are most distinctive with their pronounced pectoral glands (figure 4) with minute and numerous asperites, which also cover the dorsolateral surfaces of the thumbs. The arms and legs are remarkably robust; the toes

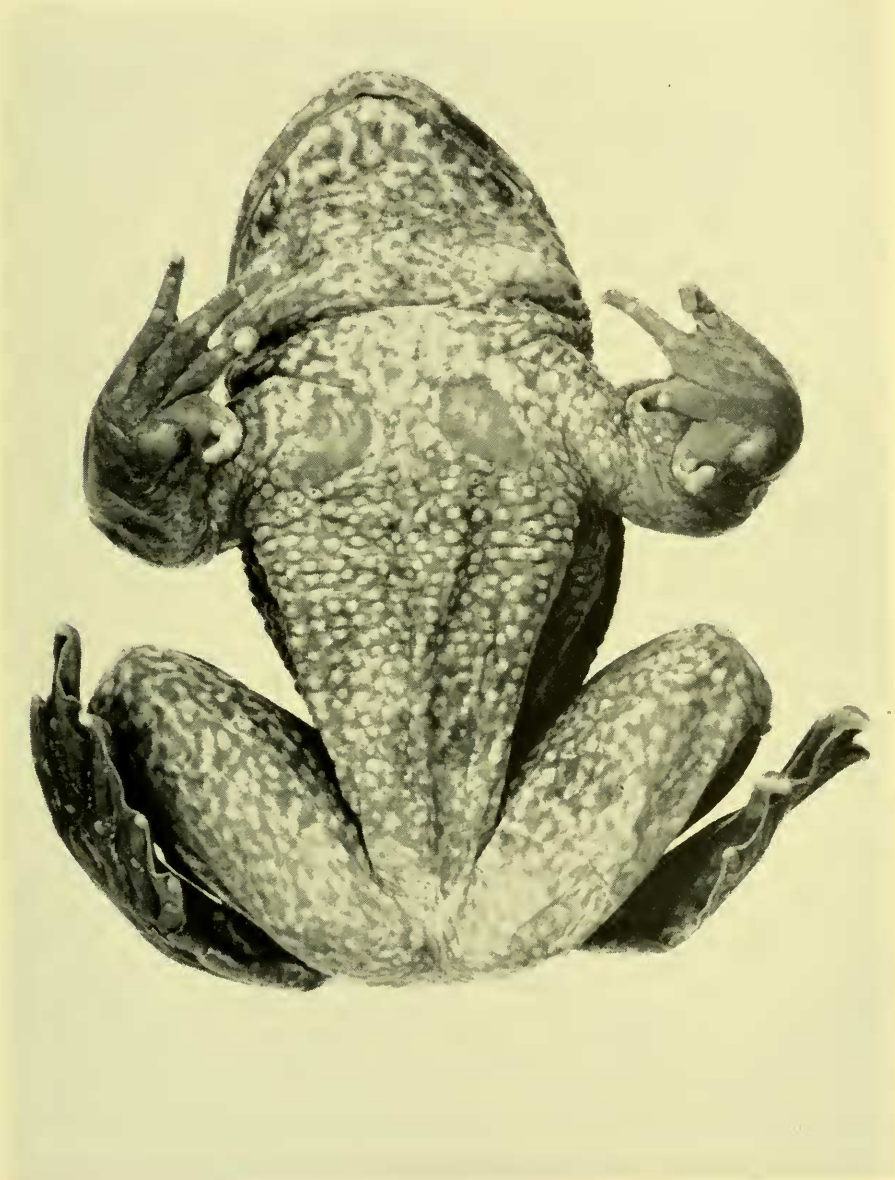

FIGURE 4. *Rana sternosignata*, ventral view showing development of pectoral mammata.

fully webbed. The females lack pectoral mammata and other secondary sexual characteristics of the males.

One of the females, CAS 92331, contained masses of small eggs in the body. Stomach contents included remains of aquatic beetles and arachnids of unknown kinds.

These distinctive ranids, which are allied to the high-altitude ranids of western China and Tibet (*Rana boulengeri, R. phrynoides, R. pleuroden,* and *R. tibetanus*), resemble in body habitus the high-altitude South American semiaquatic leptodactylid frogs of the genus *Telmatobius* and other high altitude frogs such as *Scutiger* (Asian pelobatids). All are stout, with strong, short limbs, thick, somewhat tubercular and loose skin, large feet, and broad heads.

The largest male measures 125 mm. in snout-vent length, the largest female 82 mm.

Alsophylax pipiens (Pallas).

Material examined (3): Kabul [April 30 and May 11] (CAS 91613–91614); near Paghman River, 10 km. southwest of Kabul [Aug. 9] (CAS 92339).

This constitutes the first record of this species from Afghanistan (figure 5).

Over the years there has been a remarkable amount of confusion regarding this form. Pallas, in 1811, described *Lacerta pipiens.* In 1823, Lichtenstein (in Eversmann) referred a gecko, believed identical to Pallas', to *Ascalabotes pipiens,* and in 1832 Eichwald transferred Pallas' species to *Gymnodactylus,* basing his conclusion of generic affinities on specimens he obtained in the Transcaspian region. Fitzinger established the genus *Alsophylax* for Pallas' gecko after showing that the toes were not angularly bent as they are in *Gymnodactylus* [= *Cyrtodactylus* for the Asian species formerly assigned to *Gymnodactylus*]. It was not until 1912 that Bedriaga showed that the specimens Lichtenstein and Eichwald had before them were not the same as those seen by Pallas. *Alsophylax pipiens* (Pallas) is a non-tuberculate gecko which differs in this character from Lichtenstein's and Eichwald's tuberculate "*pipiens.*"

In 1915, Nikolsky illustrated a tuberculate gecko which he called *Alsophylax pipiens* Pallas but which is like *A. pipiens* of Lichtenstein, *et al.* Sometime earlier he had described *A. laevis,* illustrated in 1915 and obviously a non-tuberculate gecko, which we believe is close to, if not synonymous with *A. pipiens* of Pallas.

Pallas' species is *not* tuberculate, as indicated in the original description by the omission of any reference to that possible character; as pointed out by Bedriaga it also has enlarged subcaudal shields and is not uniformly

FIGURE 5. *Alsophylax pipiens* (Pallas), dorsal view. Note particularly the absence of enlarged tubercles on the dorsum.

granular below. This being the case we suspect it may well be necessary to revise our current views on the content of the genus *Alsophylax* (type species *Lacerta pipiens* Pallas, by original designation by Fitzinger, 1843). Of the

11 nominal species presently assigned to that genus at least 8 have both tubercles and granules on the dorsum, including those referred to as *A. pipiens* by Lichtenstein, Boulenger, Nikolsky, and others. In 1874, Blanford proposed the nominal genus *Bunopus* for *B. tuberculata* later referred to *Alsophylax* by Boulenger. We believe it desirable to reinstate Blanford's genus and refer to it those tuberculate species presently placed in *Alsophylax,* including *Ascalbotes pipiens* Lichtenstein (= *Gymnodactylus pipiens* Eichwald, *Alsophylax pipiens* Boulenger, Nikolsky, *et al.*), thereby restricting *Alsophylax* to include the nominal species *Lacerta pipiens* Pallas, *Gymnodactylus microtus* Blanford (perhaps!), and *Alsophylax laevis* Nikolsky (Chernov, 1959, p. 40, regards this form as a subspecies of *A. pipiens*). Under this arrangement the genus *Alsophylax* may be redefined as follows: Digits straight, not dilated or so angularly bent at any of the articulations as in *Gymnodactylus* (= *Cyrtodactylus* for Asian species), clawed, with transverse lamellae beneath, without a lateral fringe or denticulation of pointed scales. Dorsum with small, juxtaposed scales, without enlarged tubercles. Enlarged subcaudal shields present. Pupil vertical. Males with preanal pores.

Crossobamon may be distinguished from *Alsophylax* and *Bunopus* by possessing fringes along the lateral edges of the toes, and with *Bunopus* it may be distinguished from *Alsophylax* by the presence of scattered enlarged tubercules on the dorsum. Nikolsky's genus *Microgecko* (sometimes referred to the North African-Arabian genus *Tropiocolotes*) is also easily distinguished by its imbricate dorsal scales, rather than granules. *Tropiocolotes helenae* of Mertens (1956) should be re-examined to see if it is not in fact *A. pipiens* of Pallas.

Agama caucasica (Eichwald).

Material examined (11): Toward Ghazni, a few km. from Shash Gao [April 15] (CAS 91590–91598); near Paghman River, 10 km. southwest of Kabul, at 2100 M. [Aug. 1] (CAS 92329, 92338).

Immature specimens generally have dark reticulations on the under surfaces of throat and abdomen, these becoming more diffuse with age. All mature individuals are heavily infested with mites beneath the scales of both tail and body. Stomach contents include insect and plant material. Neither of the two mature females, taken in April, is gravid. One of the two males taken in April, and the large male (121 mm. in snout-vent length) taken in August, have clusters of callose preanal scales. The smallest specimen (38 mm. in snout-vent length) was taken in August, while the other young (39–47 mm. snout-vent length) were collected in April. Anderson (1962), after examining collections of *Agama nupta* obtained by him in

southwestern Iran, in 1958, pointed out that "gravid females were collected in March, August, and October. This indicates that eggs are laid at least in the Spring and in the Autumn in this region." The collection of young specimens of *A. caucasica* in both April and August in east-central Afghanistan suggests a similar situation obtains as Anderson found in Iran.

Ablepharus pannonicus Fitzinger.

Material examined (2): 36 km. from Kabul, on road to Kandahar, at 2300 M. [April 10] (CAS 91610–91611).

Both specimens have three dark longitudinal dorsal stripes, a broader dark dorsolateral stripe, edged with white above, and a suffusion of blue on the undersides. Both have 21 longitudinal scale rows at midbody. The larger, CAS 91610, measures 36.1 mm. snout-vent length, and has a regenerated tail; the smaller measures 29.3 mm. snout-vent length, the tail measures 47.5 mm.

Eremias guttulata watsonana Stoliczka.

Material examined (6): 35 km. from Kabul, on road to Kandahar, at 2300 M. [April 30] (CAS 91612); toward Ghazni, a few km. from Shash Gao, at 2600 M. [April 15] (CAS 91599–91602); near Paghman River, 10 km. southwest of Kabul [Aug. 9] (CAS 92340).

The single female taken in April contains a few small eggs. One juvenile was obtained in August. It must be noted that of 16 specimens of this species collected by Gasperetti to date, 15 adults were taken during the months of January, February, March, and April. All but one female were found to be gravid. The one juvenile was taken in August. From previous investigations on Iranian reptiles (Anderson, 1962) it is thought that this juvenile must be about two months old (24.1 mm. snout-vent length), suggesting that the egg hatched in late May or early June. Perhaps these animals breed but once each year (see *Agama caucasica* for contrasting situation), laying their eggs in late winter or early spring, which then hatch in late spring or early summer (about 60 days incubation?).

In CAS 91599, the third supralabial on the right side is divided into two shields, one above the other. In CAS 91602, the sixth, rather than the fifth supralabial is the largest on the left side.

Snout-vent lengths: adults, 37.8–53.2 mm., juvenile, 24.1 mm; tail lengths: adults, 68.3–90.1 mm., juvenile, 40.6 mm. Dorsal scale rows, 42–47; ventral scale rows, 10; supralabials, 9–10; femoral pores, 11–13.

These specimens agree well with Gasperetti's previous series of 9 specimens from the Tarnak River area, near Kandahar (Leviton and Anderson, 1961), and do not differ significantly from 25 specimens from southwestern Iran (Anderson, 1962).

Coluber rhodorachis (Jan).

Material examined (1): 15 km. southwest of Kabul, on road to Kandahar, 2200 M. [Sept. 4] (CAS 92323).

A single specimen was taken by Gasperetti. It differs from others of this species previously reported on from Afghanistan in lacking the distinct blotches on the dorsum; rather they are small, irregular, dark patches.

Ptyas mucosus (Linnaeus).

Material examined (1): 40 km. from Kabul, along road to Kandahar, 2300 M. [Sept. 18] (CAS 92324).

A single, typical specimen of this species was taken. Only the skin and head were kept.

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